

REMARKS

The Advisory Action indicates that the Response filed on January 22, 2007 was entered and that the rejection under 35 USC 112, second paragraph, and the rejection under 35 USC 103 over Sun in view of Sollbohmer were overcome. The remaining rejections under 35 USC 103 were not overcome. Accordingly, the present response is being filed in conjunction with a Request for Continued Examination (RCE) and Applicants request entry of the amendment.

Claims 1 and 72 have been amended. Claims 11, 14, 79 and 81 have been canceled. Subsequent to the entry of the present amendment, claims 1, 3-6, 8-10, 12, 13, 15-18, 72-78, 80 and 82-85 are pending and at issue. These amendments and new claims add no new matter as the claim language is fully supported by the specification and original claims.

I. Rejections Under 35 U.S.C. § 103(a)

A. Claims 1, 3-6, 8-18 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sun. (6780648) in view of Sollbohmer (2002/0051737).

The Advisory Action states that this rejection was overcome by the response to the Final Office Action filed on March 16, 2007, rendering this rejection moot.

B. Claims 1, 3-18, 72-85 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sun and Sollbohmer as applied to claims 1-6, 8-18 above, and further in view of Peck et al and/or Krug et al. Applicants respectfully traverse this rejection.

To establish a prima facie case of obviousness, even after KSR International v. Teleflex Inc. (550 U.S. __ (2007)), three basic criteria are considered. First, some suggestion or motivation to modify a reference or to combine the teachings of multiple references. Second, the combination suggested has a reasonable expectation of success. Third, the prior art combination teaches or suggests all of the recited claim limitations.

Dependent claims 10 and 14 have been incorporated into claim 1, and dependent claim 79 has been incorporated into claim 72. Applicants have also amended claims 1 and 72 to clarify that “the actuation signals are controlled by computer software to control the opening and closing of the dispensing devices for dispensing fluids substantially simultaneously into multiple corresponding target wells of the assay plate, the time intervals for opening and closing of the dispensing devices being less than the time required for the dispensing tips to move past the target wells” and “a motor drive system for controlling movement of an assay plate, wherein the motor drive system moves the assay plate in a substantially continuous switchback pattern beneath the plurality of dispensing tips.” Support for these amendment can also be found in the specification, see for example, paragraphs [0018] and [0059].

Applicants assert that the prior art, either separately or in combination, teach or suggest all of the recited claim limitations of amended claims 1 and 72 shown above.

Sun discloses a dispensing assembly 50 that “includes X-Y robotic positioning stage 58, which supports both an array plate 60 and reservoirs 62 containing luminescence precursor material solutions. X-Y robotic positioning stage 58 is controlled by computer 56 to position reservoirs 62 beneath respective positive displacement syringes 54” and “X-Y robotic positioning stage 58 controlled by computer 56, positions wells 68 of plate 60 beneath respective syringes 54 and lowers the syringes toward the wells 68 to a position for delivery of solution” (Sun, col. 3, lines 15-30). Nowhere in Sun does it disclose that the X-Y robotic positioning stage 58 (or motor drive system) “moves the assay plate in a substantially continuous switchback pattern beneath the plurality of dispensing tips” during dispensing. Sun also fails to disclose that the dispensing of the fluid is done “substantially simultaneously into multiple corresponding target wells of the assay plate, the time intervals for opening and closing of the dispensing devices being less than the time required for the dispensing tips to move past the target wells”.

A review of Sollbohrer discloses a storage container 24 with system fluid coupled with micropumps to pipettes 12. During pipetting of sample fluid from a plate 17 in to second plate 18, a

vacuum is applied to the system fluid such that the pipettes 12 aspirate sample fluid from the plate 17 and eject it into plate 18 (Sollbohmer, paragraph [0046], see also [0036]). The “sample ejection head preferably comprises at least one controller connected with the micropumps for controlling said micropumps” (Sollbohmer, paragraph [0024]). The “movement of the stage 14 can be controlled by the control unit 26 or another control unit” (Sollbohmer, paragraph [0040]). Nowhere in Sollbohmer does it disclose that the control unit 26 (or motor drive system) “moves the assay plate in a substantially continuous switchback pattern beneath the plurality of dispensing tips” during dispensing. Sollbohmer also fails to disclose that the dispensing of the fluid is done “substantially simultaneously into multiple corresponding target wells of the assay plate, the time intervals for opening and closing of the dispensing devices being less than the time required for the dispensing tips to move past the target wells”.

The Final Office Action states that “Peck et al teaches a dispenser similar to that of Sun, including gas pressure to pump fluids form containers through lines to dispensers (Fig. 2)” and “Krug et al teaches a dispenser similar to that of Sun, including gas pressure to pump fluids form containers through lines to dispensers (Fig. 1).” Applicants assert that the addition of Peck et al and/or Krug et al. do not cure the defects in Sun and Sollbohmer shown above.

For at least the reasons discussed above, Applicants respectfully request withdrawal of the rejection of the claims under 35 U.S.C. § 103(a).

C. Claims 1, 3-18, 72-85 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over WO 01/67114 (hereafter WO) in view of Sollbohmer (2002/0051737). Applicants respectfully traverse this rejection.

The Final Office Action alleges that “WO teaches frame 4, dispensing module including reagent containers 6, 7, pressurized air manifold 8, and dispensing tips 13, 14 over moveable assay plate on an X-Y stage” but “WO fails to teach the dispensers in a module removably attached to a frame”. The Office Action further alleges that “Sollbohmer teaches a dispensing

module including tips 12, pumps 46 and reagent containers 24 on head 10 removably coupled to frame 22 by sliding (quick) connectors 50, 52” and it “would have been obvious to one of ordinary skill in the art to provide the tips, pumps, valves and reagent containers of WO in a dispensing module like that of Sollbohmer”.

Applicants assert that there is no suggestion or motivation to combine the WO reference with Sollbohmer. And even if the WO reference was combined with Sollbohmer, there is no reasonable expectation of success.

WO teaches a method of dispensing a volume of fluid from a reservoir into a series of wells in a continuous uninterrupted flow (WO, Abstract) and the “advantage of this preferred embodiment is clearly that *a less complicated dispensing system is required* since the flow of fluid has no longer to be interrupted at a rather high frequency and since no control system is required to synchronise the interruptions of the fluid flow with the movement over the series of wells” (WO, page 3, lines 23-27, emphasis added). Nowhere in WO does it disclose a need for a removable dispensing module, which may be considered more complicated.

Sollbohmer discloses that “During a conventional pipetting process the pipettes 12 are, in a first step, *lowered into the wells* of the carrier plate 17 and take a sample fluid from said wells. This is effected for example by applying a vacuum to the pipettes 12. For taking in test or sample fluid the pipettes 12 contain system fluid to which a vacuum is applied. Then the stage 14 is shifted and pivoted such that the pipettes 12 are arranged above the wells of the carrier plate 18. The pipettes 12 are now *lowered into the wells* on the carrier plate 18 and eject, in several steps, the fluid taken from the wells of the carrier plate 17 into a plurality of well rows. The carrier plates 17, 18 may be arranged on the stage 14 such that the stage 14 needs not be pivoted” (Sollbohmer, paragraph [0036], emphasis added). In each instance, the pipettes 12 are lowered and raised from the wells of the carrier plate.

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Applicants assert that it is unlikely that a person skilled in the art would combine WO with Sollbohmer to create a more complicated dispensing system to have a removable dispensing module. In addition, there is no reasonable expectation of success combining WO with Sollbohmer. Sollbohmer discloses raising and lowering the pipettes into the wells for dispensing and aspirating fluids, which is incompatible with "dispensing a volume of fluid from a reservoir into a series of wells in a continuous uninterrupted flow", disclosed in WO.

Accordingly, there is no suggestion or motivation to combine WO with Sollbohmer, as suggested in the Office Action, and even if combined, there is no reasonable expectation of success. For at least the reasons discussed above, Applicants respectfully request withdrawal of the rejection of the claims under 35 U.S.C. § 103(a).

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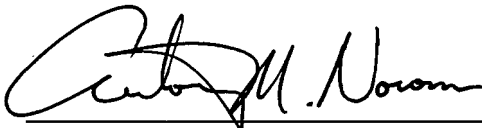
II. Conclusion

In view of the above amendments and remarks, reconsideration and favorable action on all claims are respectfully requested. In the event any matters remain to be resolved, the Examiner is requested to contact the undersigned at the telephone number given below so that a prompt disposition of this application can be achieved.

A check in the amount of \$845.00 is enclosed as payment for the Request for Continued Examination fee (\$395.00) and the three-month Extension of Time fee (\$510.00) minus a one-month Extension of Time fee (\$60.00). No other fee is deemed necessary in connection with the filing of this Response. However, the Commissioner is hereby authorized to charge any fees that may be associated with this communication, or credit any overpayment to Deposit Account No. 07-1896, referencing the above-identified attorney docket number. A copy of the Transmittal Sheet is enclosed.

Respectfully submitted,

Date: May 14, 2007


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